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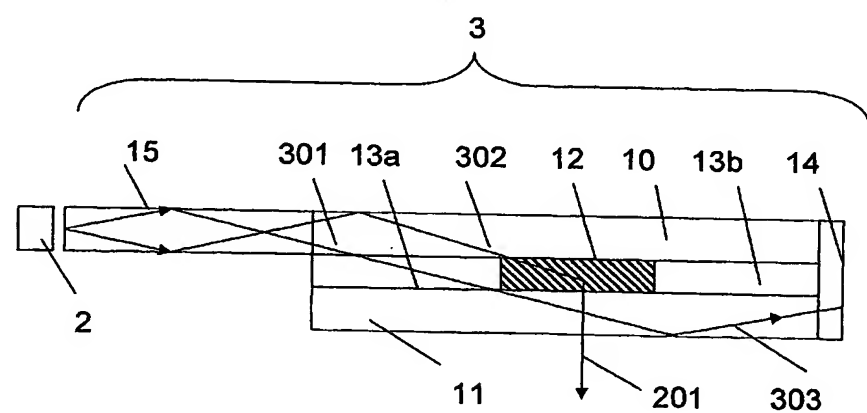
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(54) Title: SWITCHABLE VIEWFINDER DISPLAY



(57) Abstract: A compact high quality and lightweight symbol generator for projecting symbolic information into the field of view of a viewfinder is provided. The symbol generator comprises at least one ESBG device sandwiched between a pair of transparent plates which together function as a total internal reflection lightguide, switching electrodes and means for coupling illumination into the lightguide. Each ESBG device contains information encoded in a multiplicity of separately switchable grating regions. A plurality of independently switchable transparent electrodes elements, substantially overlay the separately switchable grating regions. When no electric field is applied, the ESBG device is in its diffracting state and projects images of said information towards the viewer. The projected images are surimposed onto an image of the external scene. When an electric field is applied the ESBG no longer diffracts and hence no information is displayed. In a further embodiment of the invention, the symbol generator could be configured to provide symbols of different colors by arranging for different symbols to contain ESBGs optimized for the required wavelengths and LEDs of appropriate spectral output. In a yet further embodiment of the basic invention several ESBG panels could be stacked such that by selectively switching different layers it is possible to present a range of different symbols of differing colors at any specified location in the field of view.

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